

# A New Species of *Justicia* (Acanthaceae) from Venezuela

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**ABSTRACT.** Current floristic research in Venezuela has resulted in the recognition of another new species of *Justicia*. This new species, *Justicia aymardii*, presently known from the slopes of the eastern Andes, the Sierra Nevada de Merida, is described, illustrated, and compared to its closest relative, *Justicia ischnorhachis* Leonard, which is from Colombia. It alone among *Justicia* has the combination of (1) a 4-parted calyx, (2) multicellular purplish colored trichomes along the stem, peduncles, and rachis, and (3) a conspicuous purplish to reddish purple, long, somewhat curved, tubular corolla (20–28 mm long) with relatively short lips (8–9 mm long). This new species does not appear to be closely related to any of the known species of *Justicia* from Venezuela.

*Justicia* is the largest and taxonomically most complex genus of Acanthaceae, with ca. 600 species worldwide (Graham, 1988; Mabberly, 1997). It is also the largest genus of the family in Venezuela, with about 45 species found there. The genus is characterized by the gamopetalous and zygomorphic corollas with the tube divided above into 2 lips, the upper lip erect, shallowly bilobed or, more rarely, entire, and the lower one usually somewhat spreading and distinctly trilobed. *Justicia* also has an androecium of two 2-thecous stamens and no staminodes, and 2-, 3- or 4-aperturate pollen with a trema area usually transversed by 2 to 8 rows of up to 10 insulae (Fig. 2), and stipitate capsules with four (or fewer) seeds.

***Justicia aymardii*** Wasshausen, sp. nov. TYPE: Venezuela. Barinas: Dto. Bolívar, La Soledad, 20 km SW of Barinitas, 700 m, 20 June 1983, G. Aymard & F. Ortega 2281 (holotype, US; isotype, PORT). Figures 1, 2.

Suffrutex, caulibus quadrangularibus, pilosis. Foliorum lamina anguste ovata vel lanceolata, acuta vel acuminata, basi attenuata, subcoriacea, utrinque pilosa, costa et venis lateralibus pilosis; petioli pilosi; spicae terminales et axillares, pedunculis et rachidibus quadrangularibus, pilosis; bracteae viridae, anguste ovatae, puberulae, ciliatae; bracteolae subulatae, parce hirtellae; calycis segmenta 4, viridia, lance-subulata, minute puberula; corolla purpurea, parce pilosa, tubo anguste infundibuliformi, labio su-

periore erecto, ovato, acuto, labio inferiore trilobato, lobis ovatis, medio obtusis, lateralibus retusis; stamina exserta; lobis antherarum obliquis superpositis.

Shrub or undershrub, 0.8–2 m tall. Stems ascending, quadrangular-ridged, conspicuously pilose, the trichomes erect and scattered and purplish colored, 1–1.5 mm long. Leaves petiolate, petioles 7–15 cm long, pubescence similar to that of stem, blades narrowly ovate to lanceolate, 7.5–11 × 2.2–4 cm, apically acute to acuminate, attenuate at base, subcoriaceous, entire, dark green and sparingly pilose and puberulous above, the pilose trichomes adpressed, somewhat lighter green and moderately pilose below, the trichomes adpressed and purplish colored, the costa and lateral veins (7–9 pairs) pilose, the cystoliths often inconspicuous and scattered. Inflorescence of compact, terminal and axillary spikes (Fig. 1), these barely exceeding the terminal leaves, the uppermost spike sometimes forked or sparingly branched forming a loose panicle, 3–5 cm long, the peduncles 8–25 mm long, quadrangular, densely pilose, the trichomes erect and purplish colored, the rachis similar to the peduncles; bracts narrowly ovate, 3.5–5.5 × 2–2.5 mm, apically acuminate, clasping basally, rather firm, moderately pubescent, especially along the costa, the trichomes erect, the margin ciliolate; bracteoles subulate, 3.5 × 0.5 mm, sparingly hirtellous, especially along the costa, the margin ciliolate; calyx 8–12 mm long, deeply 4-parted, lobes green, lance-subulate, 7–10 × 0.8–0.9 mm, the pubescence similar to that of the bracts and bracteoles; corolla purple to reddish purple, 20–28 mm long, externally sparingly pilose, tube 1.5 mm at base, narrowed to 1.2 mm at 2 mm above base, thence gradually enlarged to 3.25 mm at mouth, the lips subequal, 8–9 mm long, the upper lip erect, ovate, 4 mm wide near the base, narrowed toward tip, apically acute, the lower lip somewhat spreading, oblong, 4–5 mm wide, 3-lobed, the lobes ovate, 1 mm long, the middle lobe 1.5 mm wide, apically obtuse, the lateral ones 1 mm wide, apically retuse; stamens exserted 6–7 mm beyond mouth of corolla tube, glabrous, the filaments flattened, glabrous, the anthers 1.5 mm long, the thecae 1.5 mm long, superposed at an angle to each



Figure 1. *Justicia aymardii* Wasshausen (Aymard & Ortega 2281, holotype). —A. Habit. —B. Bract. —C. Bracteoles and calyx lobes. —D. Cupula, ovary, and style. —E. Corolla. —F. Capsule, retinacula, and seeds.

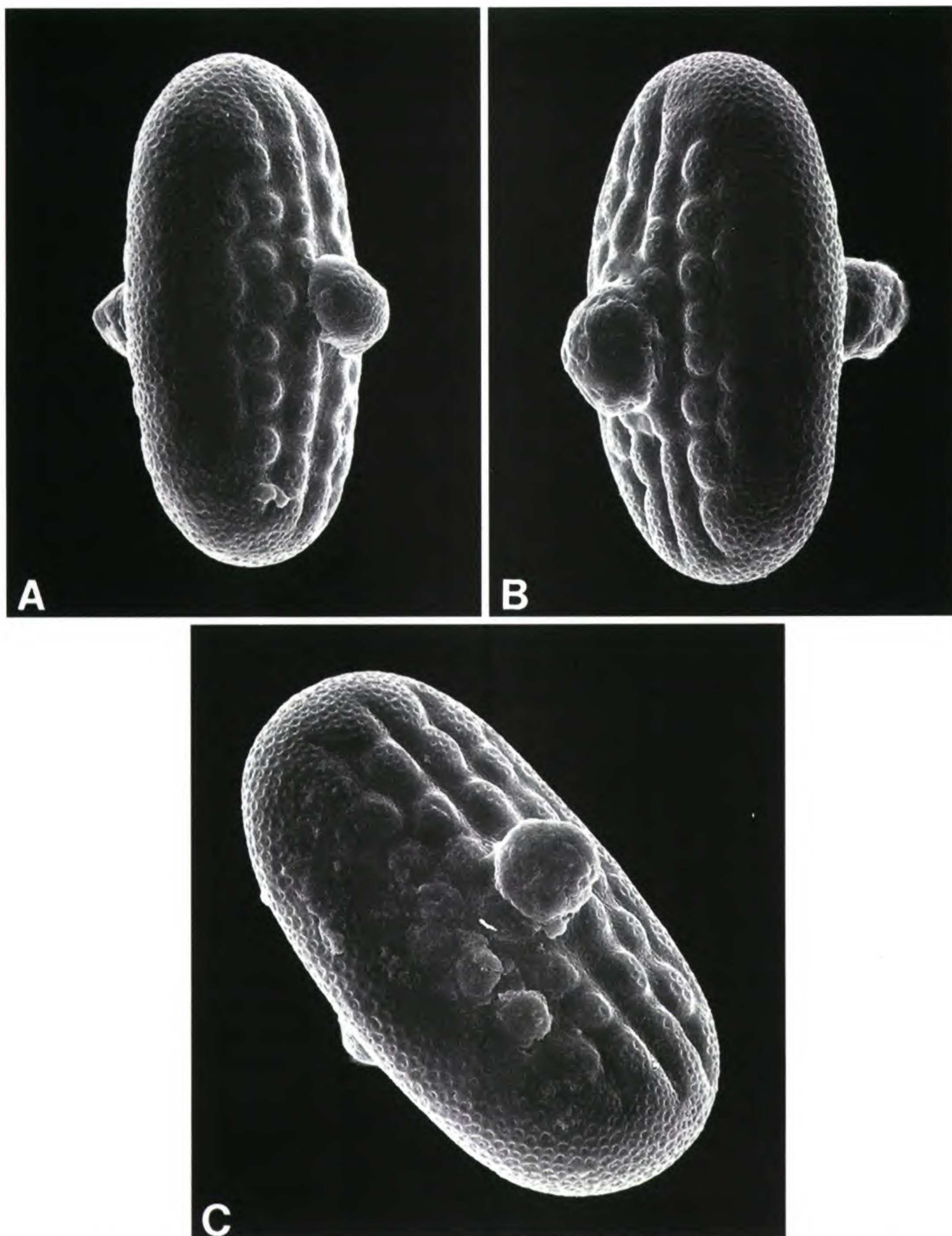


Figure 2. Scanning electron (SEM) photomicrographs of *Justicia aymardii* pollen (Aymard *et al.*, 4272). —A. Equatorial view,  $\times 1400$ . —B. Equatorial view,  $\times 1400$ . —C. Equatorial view,  $\times 1700$ .

other, the lower thecae calcarate; pollen 2-porate, prolate to perprolate,  $50 \times 22 \mu\text{m}$ , the pores circular, the membranes reticulate, trema area studied with 4 rows of  $5-7 \pm$  circular insulae (Fig. 2A, B, C); ovary pubescent, style filiform, pubescent,

exceeding the stamens, the stigma oblique. Capsule clavate,  $9-9.25 \times 2.25 \times 1.25 \text{ mm}$ , apically acute; retinacula 2 mm long, slightly curved, erose; seeds 4, suborbicular, brownish, 1.75 mm diam., 0.5 mm thick, tuberculate.

**Distribution.** Endemic to Venezuela; plants occur in cloud forests, coffee plantations, and montane forest in the states of Portuguesa, Barinas, and Táchira at elevations between 700 and 1500 m.

*Justicia aymardii* superficially resembles *J. ischnorhachis* Leonard from Villavicencio, Meta, Colombia. In *J. ischnorhachis* the leaf blades are moderately firm, obtuse or rounded basally, apically slenderly acuminate, the tip often curved, the petioles 3–8 mm long, glabrous or sparingly puberulous, the spikes 3–12 cm long, the peduncles slender, glabrous, the calyx lobes stramineous, and the corollas red, reddish straw-colored, dull crimson, or reddish orange, 26–30 mm long, with the lateral lobes of the lower lip obtuse. By contrast, in *J. aymardii* the leaf blades are coriaceous, attenuate basally, apically acute to acuminate, the tip not curved, the petioles 7–15 mm long, conspicuously pilose with purplish colored trichomes, the spikes 3–5 cm long, the peduncles firm, densely pilose with purplish colored trichomes, the calyx lobes green, and the corollas purple to reddish purple, with the lateral lobes of the lower lip retuse.

*Justicia aymardii* is not readily identifiable with any subgeneric taxa using the keys and descriptions provided by Graham (1988). It has pollen

(“Type 7,” fig. 5 in Graham, 568) like that found in five sections recognized by Graham.

**Paratypes.** VENEZUELA. **Portuguesa:** Dto. Sucre, La Divisoria de la Concepción, 5 km NW of Las Flores settlement, 9°18'N, 70°6'W, 1300–1500 m, 15 Oct. 1985, *G. Aymard et al.* 4272 (PORT, US). **Barinas:** Dto. Bolívar, 30 km W of Barinitas, road Barinitas–Santo Domingo, Quebrada San Isidro, 8°42'N, 70°25'W, 1600 m, 19 Nov. 1982, *G. Aymard et al.* 1653 (PORT, US); Dto. Pedraza, trail from Mesa de Canagua (ca. 8°32'N, 70°39'W) to Alto de La Aguada (ca. 8°37'N, 70°40'W), ca. 23 km NW of Curbatí, 800–1400 m, 17 Apr. 1988, *L. J. Dorr et al.* 4754 (NY, US). **Táchira:** Dto. Uribante, Hydroelectric Uribante-Capaso Complex, sector El Cedral, vicinity Presa La Honda, 8°1'N, 71°37'W, 1100–1250 m, 15 Nov. 1988, *R. Rivero et al.* 1882 (PORT, US).

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